

**AMENDMENTS TO THE SPECIFICATION**

**Please replace the paragraph beginning at page 1, line 14 after the sub-heading “Background Technology” with the following amended paragraph:**

Titanium oxide (titania) has better properties than alumina in respect to hydrogenation ability, corrosion resistance, photooxidation ability, and the like and, for this reason, it is attracting attention as a high-performance catalyst material not only in the areas of hydrotreating of petroleum fractions and denitrification of waste ~~gase~~ gas but also recently in the area of ~~photocatalysts~~ photocatalysts. However, titanium oxide obtained by the conventional synthetic methods has a relatively small specific surface area and it is difficult to provide such titanium oxide with a pore structure suitable for given reactants. In addition to these problems, titanium oxide is inferior to alumina in mechanical strength.

**Please replace the paragraph beginning at page 2, line 4 with the following amended paragraph:**

Now, the pore structure, specific surface area, and mechanical strength of porous titanium oxide ~~[[is]]~~ are decided by an aggregate of primary and secondary particles of titanium oxide and an article molded from such an aggregate is normally used as a catalyst or a catalyst carrier. The pore structure suitable for the reactants can be controlled by performing the pH swing operation and the specific surface area can be increased by adding a particle growth inhibitor, although not quite to a level as high as that of alumina or silica (JP 2003-40,689 A).

**Please replace the paragraph beginning at page 2, line 12 with the following amended paragraph:**

However, the mechanical strength of titanium oxide which occurs as spherical particles is generally lower than that of alumina which occurs as needle-shaped and/or column-shaped particles. Hence, an attempt has been made to raise the mechanical strength of titanium oxide by partially incorporating minute particles in ordinary particles (JP 2003-201,120 A); however, it is difficult to obtain mechanical strength suitable for use in general commercial catalysts even by this technique and, besides, the specific surface area of titanium oxide obtained in this manner cannot be said to be satisfactory.

**Please replace the paragraph beginning at page 6, line 24 with the following amended paragraph:**

Here, "chemically and/or microscopically united" refers to the condition where titanium oxide deposited on the surface of the inorganic oxide is not merely in ~~physically~~ physical contact with the surface of the inorganic oxide as in the case of agglomeration or mixing, but forms a strong chemical bond with the surface of the inorganic oxide or forms a bond with the inorganic oxide as extremely minute crystals while enveloping the surface of the inorganic oxide so as to be united to the inorganic oxide. The layered porous titanium oxide in this condition shows high catalytic activity of titanium oxide itself without being influenced by the chemical properties of the inorganic oxide core. It goes without saying that the layered porous titanium oxide of this invention may partly contain titanium oxide which is not chemically and/or microscopically united to the inorganic oxide core.

**Please replace the paragraph beginning at page 7, line 11 with the following amended paragraph:**

The layered porous titanium oxide of this invention is free from the following undesirable phenomena[;]: the performance degrades to the level of an intermediate between the inorganic oxide and titanium oxide and a composite effect of the inorganic oxide promotes side reactions thereby lowering the selectivity of the reactants and deteriorating the catalyst. In any of the conventional composite oxides of an inorganic oxide of a different kind and titanium oxide (prepared by the use of an inorganic oxide of a different kind as a binder or by coprecipitation with an inorganic oxide of a different kind), the inorganic oxide of a different kind in question becomes exposed partially on the surface of the composite oxide and displays its own characteristic properties as well. In contrast, the layered porous titanium oxide of this invention produces the aforementioned effect probably for the following reason: deposited titanium oxide exists as one body on the surface of the inorganic oxide or, unlike the formation of a composite by vapor deposition inside fixed pores, titanium oxide is deposited on the surface of minute particles, such as primary particles, of the inorganic oxide and this makes it possible to increase sharply the amount of deposited titanium oxide; thus, titanium oxide occupies the whole exposed surface of the inorganic oxide and exclusively manifests its own properties.

**Please replace the paragraph beginning at page 10, line 11 after the sub-heading “[Inorganic oxides]” with the following amended paragraph:**

According to this invention, an inorganic oxide to serve as a core is not restricted specifically as long as it can support titanium oxide on its surface; it may also be a compound in the condition where a large amount of hydroxyl groups, for example, a hydrosol, a hydrogel, a xerogel and a compound generally called a hydroxide or hydrated oxide. Concretely, the candidate inorganic oxide is preferably at least one selected from the group of alumina, silica, magnesia, silica/alumina, silica/titania, alumina/zirconia, silica/zirconia, and silica/magnesia-and ~~alumina~~. Alumina, silica, and silica/alumina are particularly desirable. Alumina and silica having a regulated pore structure, a relatively large specific surface area, and excellent mechanical strength are readily available and they help to produce layered porous titanium oxide having excellent properties in the end.

**Please replace the paragraph beginning at the last line of page 13 with the following amended paragraph:**

The proportion of deposited titanium oxide (content of titanium oxide) in layered porous titanium oxide as a whole is normally from 13 mass% to 60 mass%, preferably from 15 mass% to 50 mass%, more preferably from 20 mass% to 45 mass%. ~~[[Wnen]]~~ When the content of titanium oxide is less than 13 mass%, the inorganic oxide is not covered completely, becomes exposed in part, and displays its properties in the exposed parts and this makes it difficult for titanium oxide alone to manifest its surface activity. Conversely, when the content of titanium oxide exceeds 60 mass%, titanium oxide itself undergoes bonding and layered titanium oxide deteriorates in specific surface area and also in mechanical strength.